FAQs

HICAHS Project “Exploring Shed Antimicrobials Exposures within High Plains Livestock Operations”

Tracing where livestock medicine goes.

In 2010 the High Plains Intermountain Center for Agricultural Health and Safety formulated a project to trace the disposition of medicine used to treat ill or injured livestock. The study was designed to respond to the questions agricultural producers began to raise given that health care facilities and others voiced concern about possible bacterial resistance to conventional medicines used for both livestock and humans.

Why should my farm participate?

Research into this matter is underway within the U.S. Midwest. However, high plains and intermountain livestock operations are different from Midwest operations. The feed rations may not be similar, the surrounding climate is different, and the soil types do not resemble Midwestern soils. Additionally, the way in which livestock are managed may not resemble Midwestern livestock operations. These circumstances may alter the persistence and survival of medical products in livestock manure and field soil that has been amended by manure.

Your voluntary participation provides an opportunity to assess whether these medicines survive across time, and how they may persist within agricultural environments.

What is expected of me?

To participate in this study, you would need to allow us to collect one or two fecal sample(s) from the tail head of recently treated sick animals. The amount of time for performance of this task is approximately 10 - 12 minutes.

Note: We deploy stringent biosecurity procedures; our biosecurity procedures do not permit project scientists to enter your live animal “clean” area without permission from you. If you prefer, one of your employees can collect the fecal sample on our behalf. When our onsite visit is complete, we ask that you dispose of a small plastic bag containing disposable project supplies used at your farm site. See the biosecurity section below.

Once the fecal samples have been taken, a project scientist will extract three samples of fecal material from your manure holding facility and a soil sample from a nearby field where you are planning on spreading manure. The field must not have had manure spread upon it within the last 18 months.

Lastly, we need access to the field on year after manure has been spread to take a second soil sample.

I do not own/manage the land where my manure is to be spread. How will you handle that situation?

We will ask you for contact information pertaining to the owner or operator of that land. We will then contact that individual/firm in order to explain this study and ask for permission to enter the target field two times to pull soil samples.
What biosecurity measures do you take to ensure your project scientist and vehicle do not bring viruses onto my farm?

First, we always contact you ahead of time to schedule our visit and receive instructions from you about where to park our project vehicle after entering your farm site. We make only one stop per day at a farm and always allow 12 hours downtime so as to permit vehicles and project technology to air dry after having been pressure washed or sanitized.

All of our equipment, including our project pickup, is pressure washed, including tires and the undercarriage, at a local car wash you designate before travelling to and entering your farmstead parking area. Additionally, sanitized wipes are used to disinfect vehicular steering wheels, turn signal levers, tilt wheel controls, etc. Once we are onsite, all project scientists slip on disposable booties over their footwear while still seated in the pickup, and if you request, Tyvek® suits and latex gloves that are placed into use after stepping from the cab onto your parking area surface. All wear freshly laundered clothing that carries the insignia of Colorado State University.

Once at your farm site, our project functions from the vantage that a “line of separation” divides the farm into two areas: space that is used for live animals (the “clean” area in our study), and space outside the live animal area such as the feed mixing area, driveways, vehicular parking, staff housing, etc. (the “dirty” area in our study). During this project, our scientists never cross the line of separation from the dirty area into the clean area without your permission.

At the conclusion of our site visit, all protective materials are removed before reentering the pickup cab, and placed in a disposable plastic bag that is left at your farm site. We do not transport such material back to our project offices or other locations, thereby ensuring that biosecurity is preserved at your farm and all other participating farms as well.

We ask that you dispose of this plastic bag via your normal waste product disposal process.

How often will your project scientist come to my farm?

We will visit the farm twice – once to collect a fecal sample(s), manure samples, and a soil sample, and a second time to collect a second soil sample. The second soil sample will be collected one year after manure has been applied to the field.

How do I enroll my farm?

To participate, contact Dr. Gunderson at Paul.D.Gunderson.1@lrsc.edu or (701) 662-1652. If possible, indicate (1) when would be a good time to collect a fecal sample from one of your recently treated sick animals, and (2) when would be a good time to collect a soil sample prior to manure being spread on a neighboring field. A time will be arranged to come back in one year to collect a second soil sample.

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